

REMARKS/ARGUMENTS

The Office Action mailed December 31, 2007 has been received and the Examiner's comments carefully reviewed. Claims 30-33 and 44-59 are rejected. Claims 30, 50, and 56 have been amended. For at least the following reasons, Applicants respectfully submit that the pending claims are in condition for allowance.

Claim Rejections

Claims 50-59 were rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. Claims 50-59 were rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. The Applicants have amended the claims to address the rejection and respectfully request the rejection be withdrawn.

Claims 30-33, 44-45, 49-59 were rejected under 35 U.S.C. 103(a) as being unpatentable over Kaiser (US 6,060,996) in view of Cameron (US 2002/0051499). Claims 46-48 were rejected under 35 U.S.C. 103(a) as being unpatentable by Kaiser in view of Cameron and further in view of Chadwick (US 5,168,271). Claims 50-59 were rejected under 35 U.S.C. 103(a) as being unpatentable over Kaiser in view of Cameron and further in view of Gaskill et al (US 5,301,358), hereafter Gaskill '358, and Gaskill et al (US 4,713,808), hereafter Gaskill '808. The Applicants respectfully disagree but have amended the claims to more clearly define the invention.

As amended, Claim 1 recites in part “locally formatting the transmitted data for local-area wireless transmission; wherein locally formatting the transmitted data includes encoding the transmitted data at a data encoder when retransmitting using a first transmission speed and bypassing the data encoder when retransmitting using a second transmission speed” and “interleaving the locally formatted data that includes data encoded at the data encoder when retransmitting using the first transmission speed and data encoded through bypassing the data encoder when retransmitting using the second transmission speed.” In contrast, Cameron teaches interleaving data before it is encoded by a turbo encoder and then encoding interleaved data.

Describing Figure 2B, Cameron states that “The output of the Reed-Solomon (RS) unit 201 which includes a RS encoder and may include an interleaver is then provided to an interleaver 225. As discussed above the interleaver 225 is illustrated as a Ramsey interleaver. The type of interleaver used is not as important as the depth characteristics produced by the interleaver, and essentially any interleaver capable of providing a guaranteed minimum Depth may be used. Depth or distance between output symbols may be set at a desired level in order to guarantee that the burst errors of a certain length may be effectively dealt with. The depth necessary to guarantee that burst errors of a certain length may be repaired is a function of the depth of separation of input symbols.” (Cameron, par. 70.)

Cameron goes on to state that “*The output of interleaver 225 is provides to a turbo trellis-coded modulation (TTCM) encoder 208.* The output of the Reed-Solomon unit 201 is then provided to a turbo encoder 203, which applies a parallel concatenated (turbo) encoding to the input received from the Reed-Solomon unit 201, and further provides it to a mapper 205. In

addition, some of the bits of the data output from the Reed-Solomon unit 201 may bypass the turbo encoder 203 entirely and be coupled directly into the mapper 205. Such data bits which bypasses the turbo encoder 203 are commonly referred to as uncoded bits. The uncoded bits are taken into account in the mapper 205 but are never actually encoded in the turbo encoder 203.” (Cameron, par. 71)(emphasis added).

As can be seen in Cameron’s Figure 2B, Cameron teaches an interleaver 225. The interleaver 225 interleaves received message tuples. *The interleaved bits are then provided to a turbo encoder.* In some examples, the encoder is bypassed such that some interleaved bits are encoded and some interleaved bits bypass the encoder. Thus, Cameron teaches that interleaved bits are received as input to the encoder. The encoder then selectively encodes the interleaved bits.

Cameron does not teach first encoding bits at an encoder that is selectively bypassed. Cameron does not teach that after bits are selectively encoded, such selectively encoded bits are then interleaved. In fact, *Cameron teaches the reverse process: selectively encoding interleaved bits.* Thus, Cameron does not teach interleaving the locally formatted data that includes data encoded at the data encoder when retransmitting using the first transmission speed and data encoded through bypassing the data encoder when retransmitting using the second transmission speed, as is recited by amended Claim 30.

Since Cameron does not teach locally formatting the transmitted data for local-area wireless transmission; wherein locally formatting the transmitted data includes encoding the transmitted data at a data encoder when retransmitting using a first transmission speed and

bypassing the data encoder when retransmitting using a second transmission speed and interleaving the locally formatted data that includes data encoded at the data encoder when retransmitting using the first transmission speed and data encoded through bypassing the data encoder when retransmitting using the second transmission speed, Claim 30 is proposed to be allowable. Claims 31-32 and 44-49 are proposed to be allowable as they depend from a valid base claim.

As amended, Claim 50 recites in part “locally formatting the broadcast data for local-area wireless transmission, including encoding the broadcast data at a data encoder when the locally formatted data is to be retransmitted using a first transmission speed mode and bypassing the data encoder when the locally formatted data is to be retransmitted using a second transmission speed mode” and “interleaving the locally formatted data that includes data encoded at the data encoder when retransmitting using the first transmission speed and data encoded through bypassing the data encoder when retransmitting using the second transmission speed.” For at least the reasons presented above, Claim 50 is proposed to be allowable.

In addition, Claim 50 recites “wherein interleaving includes interleaving a first portion of the locally formatted data and a second portion of the locally formatted data over a broadcast frame that includes sub frames; wherein the first portion is for transmission at a first latency and the second portion is for transmission at a second latency, the second latency being lower than the first latency; and wherein each sub frame includes data associated with the first portion and data associated with the second portion that are interleaved together.” Cameron does not teach particular broadcast frames that include sub-frames. Further, Cameron does not teach that data

of different latencies are interleaved within each subframe. Accordingly, Claim 50 is proposed to be allowable. Claims 51-55 are proposed to be allowable as they depend from a valid base claim.

As amended, Claim 56 recites in part “a localcast transmitter that is arranged to receive the broadcast data and locally format the broadcast data for local-area wireless transmission, including encoding the broadcast data at a data encoder before the localcast transmitter transmits the locally formatted data using a first transmission speed mode, and bypassing the data encoder when the localcast transmitter transmits the locally formatted data in a second transmission speed mode; wherein the local cast transmitter is further arranged to interleave the locally formatted data that includes data encoded at the data encoder when retransmitting using the first transmission speed and data encoded through bypassing the data encoder when retransmitting using the second transmission speed.” For at least the reasons presented above, Claim 56 is proposed to be allowable. Claims 57-59 are proposed to be allowable as they depend from a valid base claim.


Conclusion

In view of the foregoing amendments and remarks, all pending claims are believed to be allowable and the application is in condition for allowance. Therefore, a Notice of Allowance is respectfully requested. Should the Examiner have any further issues regarding this application, the Examiner is requested to contact the undersigned attorney for the applicants at the telephone number provided below.

App. No. 10/714,092
Amendment Dated March 31, 2008
Reply to Office Action of December 31, 2007

Respectfully submitted,

MERCHANT & GOULD P.C.



Timothy P. Sullivan
Registration No. 47,981
Direct Dial: 206.342.6254

MERCHANT & GOULD P.C.
P. O. Box 2903
Minneapolis, Minnesota 55402-0903
206.342.6200

